DETAILED ACTION

This office action is in response to application 10/583,869 filed on June 21, 2006.

Claims 1-6 are under examination.

Information Disclosure Statement

1. The information disclosure statement filed June 21, 2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because **S16143263** is not translated in English language. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Objections

1. Claim 1-6 are objected to because of the following informalities: the applicant uses the word "and" in the phase "one or more of wheat, barley, oats and rye". Examiner reasonably assumes the term intended by the applicant is "or". Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "predetermined temperature" in claim 2 and 3 is a relative term which renders the claim indefinite. The term "predetermined temperature" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Without further guidance from applicant as to the parameters set by values, one of ordinary skill in the art would not be able to determine the mete and bounds of the claims, which renders these claims indefinite.

5. It is unclear as to what is encompassed by the term "adjusted" and "controlling" with regard to these steps and parameters. Said elements are discussed in the embodiments listed in the specification, but are not claimed. Without guidance from the applicant as to the parameters, the soaking, germination time, and drying process of temperature, one of ordinary skill in the art would not be able to determine the metes and bounds of the claims.

6. Claim 1-6 are indefinite for the recitation of the phrase "functional ingredients". It is unclear (a) what ingredients are referred and encompassed by the claim, and (b) what purpose (i.e. function) these ingredients provide. One skilled in the art would not be able to ascertain the metes and bounds of the claimed invention.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Raymer et al. (US 2,509,449).**

9. **Regarding claim 1, 2, 3, 4 and 5**, Raymer et al. discloses a process of making malt sprouts from barley to be incorporated into a bran-containing food product (col. 1, ln. 1-4; 18-31). Raymer et al. discloses barley are steeped in water and soak for several days (col. 1, lines 34-38) and then germinated for about a week or more (col. 1, ln. 38-43) to produce rootlets (malt roots) (col. 1, ln. 43-45). Raymer et al. discloses malt spouts produces malt flavor characteristic is due to its protein and amino acids (functional ingredients) (col. 2, ln. 1-5). With respect to claims 2 and 3, Raymer et al. discloses malt spouts are kiln dried at temperatures up to about 175°F (col. 1, ln. 46-49). With respect to claim 4, Raymer et al. discloses further processing and concentrating the malted spouts in water (extract solvent) at boiling temperature to prepare an aqueous extract of malt spouts (col. 2, line 14-21).

10. **Regarding claim 6**, Raymer et al. discloses a composition with malt extracts with bran or bran-containing material (col. 1, ln. 1-22) to be incorporated into ready-to-eat breakfast cereal type.

11. **Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Fulger et al. (US 4,613,507)**.

12. **Regarding claims 1, 2, 3, 4 and 5** Fulger et al. discloses a process of producing food composition processing malt-like flavor from germinating a cereal grain until sprouted roots develop (Abstract). Fulger et al. disclose cereal grains including wheat, barley, oats and rye (col. 2, ln. 19-21). Fulger et al. discloses incubation in the germination period to sprout roots (malt root) and further into a controlled system of temperature and time to culture the roots (col. 1, ln. 57-61; col. 2, ln. 26-34; col. 3, ln. 20-61, Example 1 and 2) after soaking. With respect to claim 2 and 3, Fulger et al. discloses roots are heated or toasted to optimize the flavor development at selected temperatures and time parameters (col. 2, ln. 40-53). With respect to claim 4, Fulger et al. discloses sprouted roots in calcium hypochlorite solution (extract solvent) (col. 3, ln. 27-30) and incubated in controlled temperatures and time (col. 3, ln. 49-59) to obtain cultured sprout roots which is considered an extract from the main material cereal grain.

13. Fulger et al. is silent on the functional ingredients in the malt roots, however Fulger et al. disclose similar cereal grains such as wheat, barley, oats and rye and processes such as soaking, germination and drying of cereal grain as claimed, it would therefore be expected that the Fulger's sprout roots (malt root) will have the same characteristics claimed, particularly the functional ingredients, absent a showing otherwise. Additionally, applicant admits that it is well known in the art that the desired functional ingredients (amino acids and β-glucan) are obtained by germinating cereal grains such as wheat, oats, barley and rye (instant specification page 2, ln. 11-24).

14. **Regarding claim 6**, Fulger et al. discloses a process of producing food composition processing malt-like flavor from germinating a cereal grain until sprouted roots develop (col. 5, claim 1- col. 6). Fulger et al. discloses the harvested cultured sprouted roots (extract) are incorporated into foodstuff such as alcoholic beverage or breakfast cereal (col. 2, ln. 54-61; col. 6, claim 5-9).

15. **Claims 1-3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Robbins et al. (Amino Acid Composition of Malted Cereals and Malt Spouts, 1971)**.

16. **Regarding claims 1, 2, 3 and 5**, Robbins et al. discloses a method of steeping in moisture, and malting (germinating) for five days cereal grains including barley, wheat, oats and rye to obtain malt sprouts and rootlets (malt roots) (pg. 15, col. 2, third and fourth para.;pg. 16, col. 1, second para.). Robbins et al. discusses changes of amino acid composition (functional ingredients) during germination in rootlets (malt roots) (Table I, II, III and IV) and concludes fairly uniform pattern of changes during the malting in amino acid composition of the five cereal species that were malted and qualitative patterns of changes are similar (pg. 20). Furthermore, Robbins et al. discloses that due to malting conditions, malting time and methods of separating the sprouts affects the amino acid composition. With respect to claim 2 and 3, Robbins et al. discloses kiln (drying) temperature at 85°C (pg. 16, col. 1, second para.).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

20. **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins et al. (Amino Acid Composition of Malted Cereals and Malt Spouts, 1971) and in view of Raymer et al. (US 2,509,449)**.

21. Robbins et al. discloses a method of steeping in moisture, and malting (germinating) for five days cereal grains including barley, wheat, oats and rye to obtain malt sprouts and rootlets (malt roots) (pg. 15, col. 2, third and fourth para.;pg. 16, col. 1,

second para.). Robbins et al. discusses changes of amino acid composition (functional ingredients) during germination in rootlets (malt roots) (Table I, II, III and IV) and concludes fairly uniform pattern of changes during the malting in amino acid composition of the five cereal species that were malted and qualitative patterns of changes are similar (pg. 20). Furthermore, Robbins et al. discloses that due to malting conditions, malting time and methods of separating the sprouts affects the amino acid composition.

22. Robbins et al. is silent on soaking malt rootlets (malt root) in an extract solvent to make extract.

23. Raymer et al. discloses a process of making malt sprouts from barley to be incorporated into a bran-containing food product ('449, col. 1, ln. 1-4; 18-31). Raymer et al. discloses further processing and concentrating the malted spouts in water (extract solvent) at boiling temperature to prepare an aqueous extract of malt spouts ('449, col. 2, ln. 14-21). It would have been obvious to one of ordinary skill in the art to extract Robbins's malted rootlets (malt root) as taught by Raymer to provide a malt flavor extract in food product ('449, col. 2, ln. 1-13) as Raymer clearly teaches that this is a successfully method of extraction of the malt.

24. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins et al. (Amino Acid Composition of Malted Cereals and Malt Spouts, 1971) as applied to claim 5 above, and further in view of Razek et al. (The Chemical Composition, the Nutritive Value and Functional Properties of Malt Spouts and its Components (Acrospires, Rootlets and Husks), 1997)**.

25. Robbins et al. discloses the claimed invention as discussed above in claim 5. Robbins et al. is silent on processed products using malt roots.

26. However, Razek et al. discloses malted barely which was germinated to obtain components including rootlets (malt roots) (pg. 50-51). Razek et al. discloses rootlets are rich in calcium, protein, moderate fiber content (pg. 50, Abstract). Furthermore, Razek et al. teaches rootlets express functional properties such as water absorption, oil absorption and emulsification capacities which are desired functional properties in food processing (pg. 50, Abstract; pg. 51, col. 2; pg. 54). Razek et al. discloses malted barley or its components, including rootlets as inexpensive source of enriching foods such as bakery products with protein and fiber source (pg. 55, 4 para.). It would have been obvious to one of ordinary skill in the art to use Robbins's malted spouts, including rootlets as additives in food product to appreciate its functional properties and nutrient values as taught by Razek et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HONG MEHTA whose telephone number is (571)270-7093. The examiner can normally be reached on Monday thru Thursday, from 7:30 am to 4:30 pm EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Htm

/Jennifer C. McNeil/

Supervisory Patent Examiner, Art Unit 1784